IN THE CLAIMS:

1. (Currently Amended) A method for wideband communication, the method comprising:

transmitting pulses from a first communication device to another device via a wireless link at a pulse repetition frequency, the pulse repetition frequency substantially defining a time difference between adjacent pulses, ~~characterized by~~ wherein the method comprises:

performing measurements, based on pulses received at said another device, in order to obtain information on delay conditions of the wireless link; and

adjusting the pulse repetition frequency based on said measurements.

2. (Original) The method of claim 1, wherein said measurements comprise measuring how a transmitted pulse is spread in time-domain due to delay on a transmission channel.

3. (Original) The method of claim 2, wherein the spread of the transmitted pulse caused by multipath propagation or echoes, experienced at said another device as a delay spread, is measured.

4. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the method comprises:

transmitting to said first communication device link control information comprising said information on delay conditions for the purpose of adjusting the pulse repetition frequency.

5. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein the method comprises adjustment of the pulse repetition frequency by

means of negotiation.

6. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein said first communication device and said another device communicate in accordance with ultra-wideband ~~(UWB)~~ technology.

7. (Currently Amended) The method of ~~any preceding~~ claim 1, wherein pulses from said first communication device to said another device are transmitted according to impulse radio ~~(IR)~~ technology.

8. (Currently Amended) A communication device configured for wideband communication, the communication device comprising:

a receiver for receiving pulses transmitted, by another device, via a wireless link, ~~characterized in that~~ wherein the communication device comprises:

a measurement arrangement for measuring, based on the received pulses, delay conditions of the wireless link for link adjustment purpose.

9. (Original) The communication device of claim 8, wherein the communication device comprises:

a transmitter for transmitting link control information comprising information indicative of the measured delay conditions to said another device for said link adjustment purpose.

10. (Currently Amended) The communication device of claim 8 ~~or 9~~, wherein the measurement arrangement is configured for delay spread measurements which indicate how a transmitted pulse is spread in time-domain due to delay on a transmission channel.

11. (Currently Amended) The communication device of ~~any one of~~ claims

8-~~10~~, wherein the communication device in configured for negotiation of pulse repetition frequency used in pulse transmission.

12. (Currently Amended) A communication device configured for wideband communication, the communication device comprising:

a transmitter for transmitting pulses via a wireless link to another device; and

a receiver for receiving link control information from said another device, ~~characterized in that~~ wherein the link control information comprises information indicative of measured delay conditions of the wireless link for link adjustment purpose.

13. (Original) The communication device of claim 12, wherein the communication device is configured for transmission of pulses in accordance with a pulse repetition frequency which substantially defines a time-domain transmission interval between two adjacent pulses.

14. (Currently Amended) The communication device of claim 13 ~~or 14~~, wherein the communication device is configured for adjustment of a pulse repetition frequency of its pulse transmission based on said received information indicative of measured delay conditions of the wireless link.

15. (Currently Amended) The communication device of ~~any one of~~ claims 12-~~14~~, wherein the measured delay conditions indicate delay spread on a transmission channel.

16. (Currently Amended) The communication device of ~~any one of~~ claims 12 ~~to 15~~, wherein the transmitter is configured for transmission according to impulse radio ~~(IR)~~ technology.

17. (Currently Amended) The communication device of ~~any one of~~ claims 12 ~~to 16~~, wherein the communication device is configured for operation in accordance with ultra-wideband ~~(UWB)~~ technology.

18. (Currently Amended) The communication device of ~~one of~~ claims 12 ~~to 17~~, wherein the communication device is selected from a group comprising: a mobile phone, a laptop computer, a desktop computer, a Personal Digital Assistant ~~(PDA)~~, a digital camera.

19. (Currently Amended) A system for wideband communication the system comprising a first communication device and a second communication device, wherein the first communication device comprises:

a transmitter for transmitting pulses to said second communication device via a wireless link at a pulse repetition frequency, the pulse repetition frequency substantially defining a time difference between adjacent pulses, ~~characterized in that~~ wherein the system comprises:

a measurement arrangement for performing measurements, based on pulses received at said another device, in order to obtain information on delay conditions of the wireless link; the system further comprising:

means for adjusting the pulse repetition frequency based on said measurements.

20. (Original) The system of claim 19, wherein said measurements comprise channel delay spread measurements for adjustment of pulse repetition frequency used in transmission.